AMENDMENTS TO THE CLAIMS

1-21. (cancelled).

22. (original) A method of lowering NO_x emissions from an internal combustion engine by passing exhaust gas generated by the combustion of fuel in the engine over a reducing catalyst, the method comprising passing a gas composition comprising an alcohol over an oxidizing catalyst to produce a reducing gas; and combining the reducing gas with the exhaust gas upstream of the reducing catalyst, wherein the oxidizing catalyst catalyzes the partial oxidation of the alcohol to an aldehyde or ketone.

23. (original) A method according to claim 22, wherein the oxidizing catalyst comprises molybdenum in a +6 oxidation state and has a surface area greater than or equal to 10 m^2/g.

24. (original) A method according to claim 23, wherein the surface area is greater than or equal to 50 m^2/g.

25. (original) A method according to claim 23, wherein the surface area is greater than or equal to 100 m^2/g.

26. (original) A method according to claim 22, wherein the oxidizing catalyst comprises molybdenum supported on a carrier selected from the group consisting of alumina, silicia, titania, and zirconia.

27. (original) A method according to claim 22, wherein the alcohol comprises ethanol.

28. (original) A method according to claim 22, wherein the oxidizing catalyst comprises molybdenum supported on alumina.

29. (original) A method according to claim 26, wherein the oxidizing catalyst comprises 1 to 20% by weight molybdenum.

30. (original) A method according to claim 22, further comprising detecting a level of NO_x in the exhaust stream and controlling the rate of combining the reducing gas with the exhaust gas based on the level of NO_x.

31. (original) A method for lowering NO_x emissions in the exhaust stream of an internal combustion engine in an operating motor vehicle by combining acetaldehyde with the exhaust stream upstream of a selective reduction catalyst, comprising: generating the acetaldehyde onboard the motor vehicle by passing a gas comprising ethanol over an oxidizing catalyst to produce the acetaldehyde, wherein the oxidizing catalyst comprises molybdenum supported on a carrier selected from the group consisting of alumina, silica, titania and zirconia.

32. (original) A method according to claim 31, wherein the carrier comprises alumina.

33. (original) A method according to claim 32, wherein the oxidizing catalyst comprises 1 to 20% by weight molybdenum.

34. (original) A method according to claim 31, wherein the acetaldehyde is produced at a yield of greater than or equal to 50% from the ethanol.

35. (original) A method according to claim 34, wherein the yield is greater than or equal to 70%.

36. (original) A method according to claim 31, wherein the gas comprises greater than 10% by volume oxygen.

37. (original) A method according to claim 31, wherein the gas comprises air.

38. (original) A method according to claim 31, wherein the gas comprises less than or equal to 1.5% by weight ethanol.

39. (original) A control system for NO_x reduction, comprising:

an internal combustion engine;

a catalytic converter;

a connecting pipe between the engine and catalytic converter providing an exhaust path and defining a downstream direction away from the engine toward the catalytic converter;

a source of ethanol; and

an oxidizing catalyst assembly having an inlet connected to the ethanol source and an outlet connected to the exhaust path upstream of the catalytic converter,

wherein the catalytic converter holds a selective catalyst reduction catalyst, and the oxidizing catalyst assembly contains an oxidizing catalyst that catalyzes the partial oxidation of ethanol to acetaldehyde at a yield of 50% or greater.

40. (original) A control system according to claim 39, wherein the source of ethanol is engine fuel carried in a fuel tank connected to the engine.

41. (original) A control system according to claim 39, wherein the source of ethanol is a secondary tank.

42. (original) A control system according to claim 39, wherein the oxidizing catalyst comprises Mo^{+6} and has a surface area greater than or equal to 10 m^2/g.

43. (original) A control system according to claim 42, wherein the surface area is greater than or equal to 50 m^2/g.

44. (original) A control system according to claim 42, wherein the surface area is greater than or equal to 100 m^2/g.

45. (original) A control system according to claim 39, wherein the oxidizing catalyst comprises molybdenum supported on a carrier selected from the group consisting of alumina, silica, titania and zirconia.

46. (original) A control system according to claim 45, wherein the carrier comprises alumina.

47. (original) A control system according to claim 45, wherein the oxidizing catalyst comprises 1 to 20% by weight molybdenum.

48. (original) A control system according to claim 46, wherein the oxidizing catalyst comprises 1 to 20% by weight molybdenum.